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Hydrological Memorandum No. 24

PERCENTAGE FREQUENCY OF RAINFALL AMOUNTS WITHIN CLOCK HOURS

(discrete periods of 60 minutes)

AT ALDERGROVE (Co. ANTRIM)

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by

K. Kenneth Woodley
Meteorological Office, Belfast

Data from rain recorders are analysed by the Meteorological Office to show in tabular form

(i) the duration (to the nearest 0.1 hour) of precipitation falling at a rate of not less than 0.04 millimetres per hour, within discrete 60-minute periods bounded by the clock hours, and

(ii) the total amount of precipitation (to the nearest 0.1 millimetre) which fell in the same periods.

2. Although there are limitations, which are explained later, on the application of summaries from this type of tabulation, the hourly values at Aldergrove, Co. Antrim (Irish National Grid Reference iJ(33) 145801, altitude 217 feet), have been summarised for the 34-year period, 1927-1960, to show

(i) in Table 1, the percentage frequency of rainfall duration associated with rainfall amount within these 60-minute periods, over the year as a whole, and

(ii) in Table 2, divided into twelve sections, the same information in respect of the calendar months.

At the top of each table is shown the percentage of 60-minute periods during which either there was no precipitation, or it fell at a rate less than 0.04 mm/hr.

3. In compiling this analysis covering 34 years a total of 298,056 clock-hour periods were used, comprising 25,296 each for January, March, May, July, August, October and December, 24,480 each for April, June, September and November, and 23,064 for February.

4. In Table 1 (all months) an entry of 00+ indicates one occasion in the 34 years, .001 indicates 2 to 4 occasions, and .002 indicates 5 to 7 occasions, etc.

5. In Table 2 (monthly tables) .004 indicates one occasion in the 34 years, .008 (or .009) indicates two occasions, and .012 (or .013) indicates three occasions, etc.

6. Using Table 1 for examples, it can be seen that

(i) on .640 per cent of the clock-hour periods a duration of rainfall of half-an-hour was associated with a fall between 0.1 and 0.4 mm;

(ii) on 1.295 per cent of the clock-hour periods rain fell for the whole hour, producing a total of between 0.1 and 0.4 mm;

(iii) on 4.495 per cent of the clock-hour periods rain fell for the whole hour. This value is obtained by summing the percentages vertically in the duration = 1.0 column, viz. 1.295 + 1.153 + .833 ..... +.001.

(iv) The maximum fall in a clock-hour period was in the 25.0 to 25.4 mm. range, with a duration of 0.7 hr.

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Limitations

7. The main limitation stems from the fact that tabulations are based upon these clock-hour periods of 60 minutes. Thus, occasions of, say, high "rates of rainfall" which occur over the exact clock hour will be lost, or rather split between the two 60-minute periods either side of that clock hour. Similarly, occasions of high rate of fall of an extremely short duration (less than one hour) may be lost, or rather masked if, within the clock-hour period, precipitation fell for a longer period but at a lower rate.

8. Though the tables do not provide a reliable guide to the frequency of actual rates of rainfall, this may not in itself be too serious a defect as frequencies of "rates" of rainfall have little practical application without specific reference to duration. The tables in this Memorandum give a guide to "mean rates" over periods of up to an hour, but, particularly in respect of the heavier falls, the frequencies will be on the low side compared with those which occur in practice.

Units

9. The millimetre unit is used in this Memorandum because the rain recorder charts analysed were in this unit. The equivalents in inches can be obtained very closely by multiplying the millimetre figures by .04 (1 inch = 25.4 mm).

Acknowledgement

10. I thank Miss K. McFall for her assistance in the extraction of much of the data from tabulations.

Meteorological Office,
Climatological Services,
Tyrone House,
Ormeau Avenue,
BELFAST, 2.

TABLE 1

PERCENTAGE FREQUENCY OF RAINFALL AMOUNTS IN TENTHS OF AN HOUR
(from discrete periods of 60-minutes)

ALL MONTHS

Percentage of discrete periods of 60-minutes of no rainfall or of rainfall at a rate less than 0.04 millimetres per hour = 85.840%

Amount range	Duration (hr.) within discrete period									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
mm.										
0.1-0.4	1.662	1.534	1.071	.727	.640	.405	.310	.308	.177	1.295
0.5-0.9	.058	.171	.250	.250	.227	.216	.191	.192	.142	1.153
1.0-1.4	.008	.041	.062	.071	.093	.072	.073	.092	.079	.833
1.5-1.9	.003	.015	.021	.026	.031	.027	.032	.033	.034	.485
2.0-2.4	.002	.008	.008	.013	.016	.016	.019	.021	.019	.285
2.5-2.9	.001	.004	.006	.010	.008	.008	.010	.011	.010	.173
3.0-3.4	--	.001	.001	.004	.004	.004	.008	.010	.003	.105
3.5-3.9	--	.002	.001	.002	.003	.004	.004	.007	.003	.055
4.0-4.4	.001	00+	.001	--	.002	.001	.002	.002	.001	.022
4.5-4.9	.001	00+	.001	--	.002	.001	.002	.002	.001	.022
5.0-5.4	--	--	00+	.001	.001	.001	00+	.001	.001	.016
5.5-5.9	--	00+	--	--	--	.001	.001	.001	.001	.012
6.0-6.4	00+	--	00+	00+	--	--	--	.001	.001	.011
6.5-6.9	00+	--	--	.001	.001	.001	00+	00+	00+	.006
7.0-7.4	--	--	00+	00+	--	--	.001	00+	.001	.005
7.5-7.9	--	00+	--	.001	00+	--	00+	.001	--	.002
8.0-8.4	--	00+	00+	--	--	--	--	00+	00+	.002
8.5-8.9	--	--	00+	00+	--	00+	--	--	--	.003
9.0-9.4	--	--	--	00+	--	--	--	--	00+	.002
9.5-9.9	--	--	--	--	00+	00+	00+	.001	--	.001
10.0-10.4	--	--	--	00+	--	--	--	--	--	.001
10.5-10.9	--	--	--	00+	--	00+	--	--	--	.001
11.0-11.4	--	--	--	--	--	--	00+	--	00+	.001
11.5-11.9	--	--	--	--	--	--	00+	--	--	.001
12.0-12.4	--	--	--	--	--	--	--	--	00+	.001
12.5-12.9	--	--	--	--	--	00+	00+	--	--	.001
13.0-13.4	--	--	--	--	--	--	--	--	--	--
13.5-13.9	--	--	--	--	--	--	--	--	--	.001
14.0-14.4	--	--	--	--	--	--	--	--	--	--
14.5-14.9	--	--	--	--	--	--	--	--	--	00+
15.0-15.4	--	--	--	--	--	--	--	--	--	--
15.5-15.9	--	--	--	--	--	--	--	--	--	00+
16.0-16.4	--	--	--	--	--	--	--	--	--	00+
16.5-16.9	--	--	--	--	--	--	--	--	--	--
...										
25.0-25.4	--	--	--	--	--	--	00+	--	--	--

NB: No entries for 17.0 to 24.9 block, nor above 25.4 mm.

TABLE 2

PERCENTAGE FREQUENCY OF RAINFALL AMOUNTS IN TENTHS OF AN HOUR
(from discrete periods of 60-minutes)

2.1 JANUARY

Percentage of discrete periods of 60-minutes of no rainfall or of rainfall at a rate less than 0.04 millimetres per hour = 81.464%

Amount range	Duration (hr.) within discrete period									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
mm.										
0.1-0.4	1.810	1.759	1.439	.968	.889	.553	.391	.439	.466	2.135
0.5-0.9	.474	.111	.289	.237	.352	.340	.312	.273	.170	1.546
1.0-1.4	.004	.024	.024	.055	.091	.067	.087	.091	.071	1.229
1.5-1.9	--	--	.008	.012	.020	.036	.032	.036	.039	.656
2.0-2.4	.004	.008	.004	.004	.012	.012	.020	.004	.016	.391
2.5-2.9	--	--	.004	--	.004	--	.008	.004	.008	.158
3.0-3.4	--	--	--	--	--	--	.004	--	--	.130
3.5-3.9	--	--	--	--	.008	.008	--	.004	.004	.043
4.0-4.4	--	--	.004	--	--	--	.004	--	.004	.055
4.5-4.9	--	--	--	--	--	--	--	--	--	.028
5.0-5.4	--	--	--	--	.004	--	--	--	--	.004
5.5-5.9	--	--	--	--	--	--	--	--	--	.012
6.0-6.4	--	--	--	--	--	--	--	--	--	.012
6.5-6.9	--	--	--	--	--	--	--	--	--	.004
7.0-7.4	--	--	--	--	--	--	--	--	--	.004
7.5-7.9	--	--	--	--	--	--	--	--	--	----
8.0-8.4	--	--	--	--	--	--	--	--	--	.004

2.2 FEBRUARY

Percentage of discrete periods of 60-minutes of no rainfall or of rainfall at a rate less than 0.04 millimetres per hour = 85.620%

0.1-0.4	1.652	1.426	1.136	.785	.720	.481	.386	.460	.264	1.669
0.5-0.9	.048	.117	.160	.269	.147	.195	.182	.182	.191	1.431
1.0-1.4	--	.017	.048	.030	.035	.074	.048	.082	.061	.893
1.5-1.9	--	--	.004	.004	.013	.009	.030	.026	.022	.520
2.0-2.4	--	--	--	.009	.009	.009	.017	.004	.009	.225
2.5-2.9	--	--	--	.004	--	.004	.013	--	.004	.121
3.0-3.4	--	--	--	--	.004	.004	--	.004	--	.052
3.5-3.9	--	--	--	--	--	.004	--	.004	.004	.026
4.0-4.4	--	--	--	--	--	--	--	--	--	.013
4.5-4.9	--	--	--	--	--	--	.004	--	--	.004
5.0-5.4	--	--	--	--	--	--	--	--	--	.004
5.5-5.9	--	--	--	--	--	--	--	--	--	.004
6.0-6.4	--	--	--	--	--	--	--	--	--	.004

2.3 M A R C H

Percentage of discrete periods of 60-minutes of no rain or of rain at a rate less than 0.04 millimetres per hour = 87.706%

Amount range	Duration (hr.) within discrete period									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
mm.										
0.1-0.4	1.241	1.308	.980	.565	.763	.399	.289	.324	.154	1.419
0.5-0.9	.024	.130	.182	.170	.170	.182	.142	.166	.150	1.360
1.0-1.4	--	.024	.063	.036	.051	.043	.047	.043	.079	.846
1.5-1.9	--	.016	.004	.004	.020	.004	.012	.004	.012	.376
2.0-2.4	--	.004	.004	.008	--	.020	.004	.008	.008	.182
2.5-2.9	--	--	--	--	.004	--	--	--	--	.119
3.0-3.4	--	--	.004	--	--	--	.004	--	--	.055
3.5-3.9	--	--	.004	--	--	--	.004	--	--	.036
4.0-4.4	--	--	--	--	--	.004	--	--	--	.012
4.5-4.9	--	--	--	--	--	--	--	--	--	.004
5.0-5.4	--	--	--	--	--	--	--	--	--	--
5.5-5.9	--	--	--	--	--	--	--	--	--	--
6.0-6.4	--	--	--	--	--	--	--	--	--	.004

2.4 A P R I L

Percentage of discrete periods of 60-minutes of no rain or of rain at a rate less than 0.04 millimetres per hour = 87.780%

0.1-0.4	1.810	1.471	.903	.735	.470	.339	.327	.237	.151	1.332
0.5-0.9	.029	.192	.241	.204	.192	.172	.151	.114	.155	.989
1.0-1.4	.004	.045	.037	.045	.106	.049	.037	.037	.045	.617
1.5-1.9	--	.016	.025	.020	.012	.008	.025	.020	.029	.290
2.0-2.4	--	.008	.004	.016	.033	.016	.004	.016	.008	.184
2.5-2.9	--	--	--	.004	--	.012	.012	.008	--	.065
3.0-3.4	--	.004	--	--	.008	.004	.004	.008	--	.045
3.5-3.9	--	--	--	--	--	--	--	.008	--	.020
4.0-4.4	--	--	--	.004	--	--	--	.004	.004	.008
4.5-4.9	--	--	--	--	--	--	.004	--	--	.004
5.0-5.4	--	--	--	--	--	--	--	--	--	.004
5.5-5.9	--	--	--	--	--	--	--	.004	--	--
6.0-6.4	--	--	--	--	--	--	--	--	--	.008
...										
9.5-9.9	--	--	--	--	--	--	--	--	--	.004

2.5 MAY

Percentage of discrete periods of 60-minutes of no rainfall or of rainfall at a rate less than 0.04 millimetres per hour = 89.947%

Amount range	Duration (hr.) within discrete period									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
mm.										
0.1-0.4	1.364	1.154	.775	.550	.506	.328	.241	.213	.122	.771
0.5-0.9	.051	.126	.241	.150	.202	.134	.119	.170	.130	.897
1.0-1.4	.008	.032	.071	.071	.087	.051	.059	.117	.075	.108
1.5-1.9	.008	--	.020	.039	.024	.020	.028	.012	.028	.277
2.0-2.4	--	.004	--	.016	.016	.012	.008	.004	.012	.202
2.5-2.9	--	.004	.008	.016	.004	.008	.004	.004	.004	.122
3.0-3.4	--	--	.004	.016	--	.004	.008	.008	.004	.043
3.5-3.9	--	--	--	--	--	.004	--	--	--	.039
4.0-4.4	--	--	--	.012	--	--	.004	--	.004	.012
4.5-4.9	--	--	.004	.004	.004	--	--	--	--	.020
5.0-5.4	--	--	.004	--	--	--	--	--	--	.004
5.5-5.9	--	--	--	--	--	--	--	--	--	.004
6.0-6.4	--	--	--	--	--	--	--	--	--	.008
6.5-6.9	--	--	--	--	--	--	--	--	--	.004
7.0-7.4	--	--	--	--	--	--	--	--	--	--
7.5-7.9	--	--	--	--	--	--	--	--	--	.004
...										
9.5-9.9	--	--	--	--	.004	--	--	--	--	--

2.6 JUNE

Percentage of discrete periods of 60-minutes of no rain or of rain at a rate less than 0.04 millimetres per hour = 86.234%

0.1-0.4	1.687	1.397	.980	.629	.474	.314	.261	.241	.139	1.038
0.5-0.9	.980	.221	.265	.290	.290	.122	.204	.188	.143	.825
1.0-1.4	.008	.057	.045	.086	.110	.078	.065	.094	.069	.596
1.5-1.9	.004	.033	.033	.049	.045	.025	.037	.029	.037	.441
2.0-2.4	.004	.016	.025	.025	.004	.020	.020	.025	.016	.249
2.5-2.9	.004	.008	.016	.025	.012	.020	.020	.016	.016	.147
3.0-3.4	--	--	--	--	.016	.008	.025	.016	.012	.082
3.5-3.9	--	--	--	.004	.012	.004	.012	.008	.004	.057
4.0-4.4	--	--	.008	--	.004	.004	.008	.016	--	.041
4.5-4.9	--	--	--	--	--	.008	--	--	.004	.016
5.0-5.4	--	--	--	--	--	.004	--	.004	.004	1008
5.5-5.9	--	--	--	--	--	--	.004	--	--	.008
6.0-6.4	--	--	--	--	--	--	--	--	--	--
6.5-6.9	--	--	--	--	--	.004	--	--	--	--
7.0-7.4	--	--	--	--	--	--	.004	--	--	.004
7.5-7.9	--	--	--	--	--	--	.004	.004	--	.004
8.0-8.4	--	--	.004	--	--	--	--	.004	--	.004
...										
11.0-11.4	--	--	--	--	--	--	--	--	--	.004
11.5-11.9	--	--	--	--	--	--	.004	--	--	--
...										
15.5-15.9	--	--	--	--	--	--	--	--	--	.004

2.7 J U L Y

Percentage of discrete periods of 60-minutes of no rain or of rain at a rate less than 0.04 millimetres per hour = 85.583%

Amount range	Duration (hr.) within discrete period									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
mm.										
0.1-0.4	2.000	1.708	1.111	.613	.545	.383	.289	.217	.115	.795
0.5-0.9	.075	.289	.300	.340	.237	.104	.134	.190	.134	.854
1.0-1.4	.028	.087	.111	.122	.111	.083	.083	.119	.059	.747
1.5-1.9	.008	.024	.055	.055	.059	.071	.024	.043	.032	.403
2.0-2.4	.004	.028	.012	.032	.032	.020	.039	.024	.024	.312
2.5-2.9	.004	.008	.016	.020	.008	.016	.024	.028	.024	.202
3.0-3.4	--	.004	--	.016	.008	.008	.012	.032	.004	.150
3.5-3.9	--	.012	.004	.012	.008	.012	.004	.012	.004	.039
4.0-4.4	--	--	.008	--	--	.008	--	--	.004	.051
4.5-4.9	.004	--	.004	.008	.008	--	.004	.008	--	.039
5.0-5.4	--	--	--	.004	--	.004	--	--	.004	.036
5.5-5.9	--	.004	--	--	--	--	.004	--	--	.032
6.0-6.4	--	--	.004	--	--	--	--	.004	--	.020
6.5-6.9	--	--	--	.004	.012	--	--	--	--	.016
7.0-7.4	--	--	--	--	--	--	--	--	.004	.020
7.5-7.9	--	.004	--	.004	--	--	--	.004	--	.012
8.0-8.4	--	--	--	--	--	--	--	--	.004	--
8.5-8.9	--	--	--	--	--	--	--	--	--	.004
9.0-9.4	--	--	--	.004	--	--	--	--	--	.004
9.5-9.9	--	--	--	--	--	--	.004	--	--	.004
10.0-10.4	--	--	--	.004	--	--	--	--	--	.008
10.5-10.9	--	--	--	.004	--	.004	--	--	--	.008
11.0-11.4	--	--	--	--	--	--	.004	--	.004	.004
11.5-11.9	--	--	--	--	--	--	--	--	--	.008
12.0-12.4	--	--	--	--	--	--	--	--	--	.004
12.5-12.9	--	--	--	--	--	.004	.004	--	--	.004
13.0-13.4	--	--	--	--	--	--	--	--	--	--
13.5-13.9	--	--	--	--	--	--	--	--	--	.004
....										
14.5-14.9	--	--	--	--	--	--	--	--	--	.004
....										
16.0-16.4	--	--	--	--	--	--	--	--	--	.004

2.8 AUGUST

Percentage of discrete periods of 60-minutes of no rain or of rain at a rate less than 0.04 millimetres per hour = 86.417%

Amount Range	Duration (hr.) within discrete period									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
mm.										
0.1-0.4	1.637	1.490	1.016	.613	.557	.372	.281	.217	.115	1.016
0.5-0.9	.107	.225	.277	.257	.221	.219	.178	.115	.063	.917
1.0-1.4	.012	.075	.079	.103	.107	.107	.071	.087	.087	.731
1.5-1.9	.012	.032	.051	.024	.051	.024	.055	.039	.028	.474
2.0-2.4	.008	.008	.028	.016	.032	.020	.016	.020	.036	.336
2.5-2.9	.008	.012	.008	.024	.028	.012	.020	.028	.020	.170
3.0-3.4	--	.004	--	.008	.004	.008	.016	.016	.008	.134
3.5-3.9	--	.004	--	.004	--	.004	.008	.008	.008	.055
4.0-4.4	--	.004	--	.012	--	.004	.004	.004	.004	.047
4.5-4.9	.004	.004	--	--	--	--	.004	.004	--	.039
5.0-5.4	--	--	--	.004	--	.004	--	.004	--	.024
5.5-5.9	--	--	--	--	--	.008	--	--	--	.016
6.0-6.4	.004	--	--	--	--	--	--	--	.004	.016
6.5-6.9	--	--	--	--	--	--	--	.004	--	.012
7.0-7.4	--	--	.004	--	--	--	--	--	.004	.008
7.5-7.9	--	--	--	--	--	--	--	.008	--	--
8.0-8.4	--	.004	--	--	--	--	--	--	--	.004
8.5-8.9	--	--	--	.004	--	--	--	--	--	.016
9.0-9.4	--	--	--	--	--	--	--	--	--	.004
9.5-9.9	--	--	--	--	--	.004	--	.004	--	.004

2.9 SEPTEMBER

Percentage of discrete periods of 60-minutes of no rain or of rain at a rate less than 0.04 millimetres per hour = 86.165%

Amount range	Duration (hr.) within discrete period									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
mm.										
0.1-0.4	1.748	1.434	1.054	.715	.502	.368	.204	.241	.131	.944
0.5-0.9	.090	.200	.233	.298	.290	.216	.188	.188	.114	1.001
1.0-1.4	.020	.049	.082	.073	.086	.073	.090	.127	.094	.858
1.5-1.9	.004	.016	.008	.025	.053	.053	.065	.049	.025	.429
2.0-2.4	.004	.008	.004	.008	.012	.012	.025	.037	.016	.392
2.5-2.9	--	.012	.008	.008	.012	.012	.012	.004	.012	.212
3.0-3.4	--	--	.004	.004	.004	.004	.004	.012	.008	.139
3.5-3.9	--	.004	--	--	.004	--	.012	.008	.008	.049
4.0-4.4	.004	--	.004	--	.008	.004	.004	--	--	.094
4.5-4.9	--	--	--	--	--	--	.004	.008	.004	.037
5.0-5.4	--	--	--	--	.004	--	--	.004	--	.016
5.5-5.9	--	--	--	--	--	--	--	.004	.004	.012
6.0-6.4	--	--	--	.004	--	--	--	.004	--	.008
6.5-6.9	.004	--	--	.004	.004	.004	--	--	.004	.016
7.0-7.4	--	--	--	.004	--	--	--	.004	--	.004
7.5-7.9	--	--	--	.004	.004	--	--	--	--	.004
8.0-8.4	--	--	--	--	--	--	--	--	--	--
8.5-8.9	--	--	.004	--	--	--	--	--	--	.004
9.0-9.4	--	--	--	--	--	--	--	--	--	.008
9.5-9.9	--	--	--	--	--	--	--	.004	--	--
...										
12.0-12.4	--	--	--	--	--	--	--	--	--	.008
...										
...										
25.0-25.4	--	--	--	--	--	--	.004	--	--	--

2.10 O C T O B E R

Percentage of discrete periods of 60-minutes of no rain or of rain at a rate less than 0.04 millimetres per hour = 86.416%

Amount range	Duration (hr.) within discrete period									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
mm.										
0.1-0.4	1.783	1.581	.933	.787	.577	.395	.277	.316	.150	.104
0.5-0.9	.036	.205	.284	.237	.249	.276	.221	.212	.142	1.028
1.0-1.4	.008	.028	.063	.103	.111	.103	.142	.119	.067	.727
1.5-1.9	--	.028	.012	.039	.028	.032	.028	.071	.075	.569
2.0-2.4	--	.004	.020	.016	.012	.012	.039	.039	.028	.360
2.5-2.9	--	.004	.008	.020	.008	.012	.004	.016	.012	.261
3.0-3.4	--	--	--	.004	.004	--	.008	.004	--	.138
3.5-3.9	--	--	.004	--	--	--	--	.016	.004	.115
4.0-4.4	.004	--	--	--	.008	--	--	.008	--	.051
4.5-4.9	--	--	--	--	.004	.004	.004	.004	.004	.032
5.0-5.4	--	--	--	--	--	--	.004	--	.004	.051
5.5-5.9	--	--	--	--	--	--	--	--	.004	.004
6.0-6.4	--	--	--	--	--	--	--	--	--	.016
6.5-6.9	--	--	--	--	--	--	.004	--	--	.008
7.0-7.4	--	--	--	--	--	--	--	--	--	.008
7.5-7.9	--	--	--	.004	--	--	--	--	--	.004
8.0-8.4	--	--	--	--	--	--	--	--	--	.008
8.5-8.9	--	--	--	--	--	--	--	--	--	.008
9.0-9.4	--	--	--	--	--	--	--	--	.004	.004
...										
11.5-11.9	--	--	--	--	--	--	--	--	--	.004
...										
13.5-13.9	--	--	--	--	--	--	--	--	--	.004

2.11 NOVEMBER

Percentage of discrete periods of 60-minutes of no rain or of rain at a rate less than 0.04 millimetres per hour = 84.448%

Amount range	Duration (hr.) within discrete period									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
mm.										
0.1-0.4	1.548	1.740	1.160	.850	.788	.482	.376	.413	.163	1.650
0.5-0.9	.045	.118	.253	.274	.253	.290	.237	.212	.176	1.221
1.0-1.4	--	.029	.061	.045	.086	.053	.069	.061	.078	.837
1.5-1.9	--	.012	.025	.004	.033	.004	.012	.037	.041	.547
2.0-2.4	--	.004	--	--	.004	.016	.025	.025	.033	.372
2.5-2.9	--	--	--	.004	.004	.004	--	.016	.008	.274
3.0-3.4	--	--	.004	--	--	.004	.008	.016	--	.143
3.5-3.9	--	--	--	.008	--	--	.004	--	--	.098
4.0-4.4	--	--	--	--	--	--	--	--	--	.049
4.5-4.9	--	--	--	--	.004	--	--	--	.004	.029
5.0-5.4	--	--	--	--	--	--	--	.004	.004	.020
5.5-5.9	--	--	--	--	--	--	--	--	.004	.029
6.0-6.4	--	--	--	--	--	--	--	--	.004	.016
6.5-6.9	--	--	--	--	--	--	--	--	--	.012
7.0-7.4	--	--	--	--	--	--	--	--	--	.004
...										
8.5-8.9	--	--	--	--	--	.004	--	--	--	--
...										
10.0-10.4	--	--	--	--	--	--	--	--	--	.004
...										
12.0-12.4	--	--	--	--	--	--	--	--	.004	--

2.12 DECEMBER

Percentage of discrete periods of 60-minutes of no rain or of rain at a rate less than 0.04 millimetres per hour = 82.231%

0.1-0.4	1.680	1.930	1.368	.921	.882	.451	.403	.387	.162	1.775
0.5-0.9	.043	.118	.265	.281	.316	.253	.221	.289	.142	1.767
1.0-1.4	--	.024	.059	.055	.134	.079	.075	.134	.095	1.202
1.5-1.9	--	--	.004	.032	.020	.043	.039	.032	.039	.826
2.0-2.4	--	--	--	.008	.024	.028	.008	.043	.020	.447
2.5-2.9	--	--	--	--	.012	--	.008	.008	.012	.221
3.0-3.4	--	--	--	.004	--	--	--	.004	.004	.138
3.5-3.9	--	--	--	--	.004	.004	.004	.004	--	.075
4.0-4.4	--	--	--	--	--	--	.004	--	--	.059
4.5-4.9	--	--	--	--	--	--	--	--	--	.008
5.0-5.4	--	--	--	--	--	--	--	--	--	.020
5.5-5.9	--	--	--	--	--	--	.008	.004	--	.024
6.0-6.4	--	--	--	--	--	--	--	--	--	.012
6.5-6.9	--	--	--	--	--	--	--	--	--	.004